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10/542,225

07/14/2005

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EXAMINER

HO, HUY C

ART UNIT

PAPER NUMBER

2617

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DELIVERY MODE

10/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/542,225 | Applicant(s) KONO, KENJI | |
| | Examiner HUY C. HO | Art Unit 2617 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/23/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/18/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/08/2008 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 5, 7, 11 and 13 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claim 11 is objected to because of the following informalities: the new added limitation was introduced into the claim but the status of the claim has not been correctly updated. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Nobuhiro (Japanese Publication number 07-030945) used in the rejection below was provided in the IDS by the Applicant.

6. **Claims 1-4, 6-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shi (6,320,855) and further in view of Andrus et al. (2003/0203735).**

Consider claim 1, (Currently Amended) Shi discloses a wireless communication terminal (see the abstract), comprising:

a measurement section that measures quality of a signal transmitted from a base station (col 5 lines 15-20, 50-67, col 6 lines 1-45);

a determination section that determines whether or not handoff is to be performed based on a measurement result of the measurement section and a criterion of the determination of the handoff (col 5 lines 15-20, 50-67, col 6 lines 1-45, col 8 lines 50-65, an improved designed parameter M and N being introduced besides a conventional handoff parameter H); and

a handoff section that performs the handoff based on a determination result of the determination section (col 5 lines 15-20, 50-67, col 6 lines 1-45),

wherein the determination section changes the criterion of the determination of the handoff when the handoff section ~~performs the handoff~~ performs the handoff of handoffs (col 5 lines 15-20, 50-67, col 6 lines 1-45, col 7 lines 30-67, col 8 lines 1-65).

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Shi does not show a repetition pattern of handoff, but it is noticeable Shi discussed in conventional handoff systems about the unnecessary and unwanted idle handoff being initiated because of slight variations as a mobile device moves (**see col 5 lines 50-67, col 6 lines 1-15**). Andrus teaches an idle handoff system and method where Andrus discloses the determination of a handoff to a better access point with significant high signal quality but not repeatedly handing off back and forth between access points in a repeating pattern continuously with a less significant signal quality (**see section [27]**), thus Andrus discloses a determination of handoff in response to a repetition pattern.

Since both Shi and Andrus teach method and system for idle handoff, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the teachings of Shi, and have repetition pattern, taught by Andrus, to improve the method and apparatus for idle handoff with neighbor channel, as discussed by Shi (**see col 1 lines 5-67, col 3 lines 15-67, col 6 lines 1-27**).

Consider claim 7, (Currently Amended) Shi discloses a handoff determination method of a wireless communication terminal which performs wireless communication using each of a first communication method and a second communication method and enables to be in an idle state condition with both methods (**see the abstract**), the handoff determination method comprising the steps of:

measuring quality of a signal transmitted from a base station (**col 5 lines 15-20, 50-67, col 6 lines 1-45**);

determining whether or not a handoff is to be performed based on a measurement result and a criterion of the determination of the handoff (**col 5 lines 15-20, 50-67, col 6 lines 1-45, col 8 lines 50-65, an improved designed parameter M and N being introduced besides a conventional handoff parameter H**);

performing the handoff based on a determination result (**col 5 lines 15-20, 50-67, col 6 lines 1-45**); and

changing the criterion of the determination of the handoff when the handoff section ~~performs~~ the handoff of handoffs (**col 5 lines 15-20, 50-67, col 6 lines 1-45, col 8 lines 50-65**).

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Shi does not show a repetition pattern of handoff, but it is noticeable Shi discussed in conventional handoff systems about the unnecessary and unwanted idle handoff being initiated because of slight variations as a mobile device moves (**see col 5 lines 50-67, col 6 lines 1-15**). Andrus teaches an idle handoff system and method where Andrus discloses the determination of a handoff to a better access point with significant high signal quality but not repeatedly handing off back and forth between access points in a repeating pattern continuously with a less significant signal quality (**see section [27]**), thus Andrus discloses a determination of handoff in response to a repetition pattern.

Since both Shi and Andrus teach method and system for idle handoff, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the teachings of Shi, and have repetition pattern, taught by Andrus, to improve the method and apparatus for idle handoff with neighbor channel, as discussed by Shi (**see col 1 lines 5-67, col 3 lines 15-67, col 6 lines 1-27**).

Consider claims 2, 8, (Original) The wireless communication terminal according to claims 1, 7, Shi, as modified by Andrus, further discloses wherein the determination section changes the criterion of the determination of the handoff when a predetermined repetition of two pilot signals is acquired (**col 7 lines 30-67, col 8 lines 1-65**).

Consider claims 3, 9, (Original) The wireless communication terminal according to claims 2, 8 Shi, as modified by Andrus, discloses wherein when qualities of the two pilot signals acquired repeatedly are equal to or greater than a predetermined value, the criterion of the determination of the handoff is changed (**sections [27]-[28]**).

Consider claims 4, 10, (Original) The wireless communication terminal according to claims 1, 7, Shi, as modified by Andrus, further discloses:

a detection section that detects time during which a preceding pilot signal is acquired every time handoff is performed, wherein the determination section changes the criterion of the determination of the handoff based on the time detected by the detection section (**col 7 lines 5-65**).

Consider claims 6, 12, (Original) The wireless communication terminal according to any one of claims 1 to 5, or claims 7 to 11, Shi, as modified by Andrus, further discloses wherein the wireless

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communication terminal enables to be in an idle state condition with both methods of cdma2000 lx method and 1xEVDO method, and the determination section is used as section for determining a handoff of cdma2000 lx method (col 6 lines 60-67, col 7 lines 1-30).

7. **Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shi (6,320,855) and further in view of Rajkotia et al. (2004/0121774).**

Consider claim 5, (Currently amended) Shi discloses a wireless communication terminal comprising:

a measurement section that measures quality of a signal transmitted from a base station (col 5 lines 15-20, 50-67, col 6 lines 1-45);

a determination section that determines whether or not handoff is to be performed based on a measurement result of the measurement section and a criterion of the determination of the handoff (col 5 lines 15-20, 50-67, col 6 lines 1-45, col 8 lines 50-65, an improved designed parameter M and N being introduced besides a conventional handoff parameter H); and

a handoff section that performs the handoff based on a determination result of the determination section (col 5 lines 15-20, 50-67, col 6 lines 1-45),

wherein the determination section determines whether or not the handoff is to be performed based selectively on either one of a value obtained by the measurement result of the measurement section predetermined period, and determines whether or not the handoff is to be performed based on and a value obtained by the measurement result of the measurement section through a predetermined number of measurement (col 5 lines 15-20, 50-67, col 6 lines 1-45, col 7 lines 5-67, col 8 lines 1-67, col 9 lines 1-45).

Shi does not show the handoff is performed based selectively on either one of a value obtained by time averaging the measurement result or a value obtained by number averaging the measurement result, however, it is noticeable Shi teaches the mobile station monitors paging channels over periods of time for determining if a handoff situation in consideration (see col 5 lines 15-67, col 6 lines 1-15). Rajkotia teaches method and system for handoff in a wireless network, where the handoff decision is

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made based on an average measurement of signal quality over a period of time to avoid short-term fluctuation of detected pilot signal strength levels (**see paragraph [76]**), thus Rajkotia discloses the handoff is performed based selectively on either one of a value obtained by time averaging the measurement result or a value obtained by number averaging the measurement result.

Since both Shi and Rajkotia teach method and system for handoff, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the teachings of Shi, and have he handoff is performed based selectively on either one of a value obtained by time averaging the measurement result or a value obtained by number averaging the measurement result, taught by Rajkotia, to improve the method and system discussed by Shi (**see col 1 lines 5-67, col 3 lines 15-67, col 6 lines 1-27**).

Consider claim 11, (Currently amended) Shi discloses a handoff determination method comprising the steps of:

measuring quality of a signal transmitted from a base station (**col 5 lines 15-20, 50-67, col 6 lines 1-45**);

determining whether or not a handoff is to be performed based on a measurement result and a criterion of the determination of the handoff (**col 5 lines 15-20, 50-67, col 6 lines 1-45, col 8 lines 50-65, an improved designed parameter M and N being introduced besides a conventional handoff parameter H**); and

performing the handoff based on a determination result,

wherein whether or not the handoff is to be performed is determined based selectively on either one of a value obtained by the measurement result of the measurement section for a predetermined period, ~~and determines whether or not the handoff is to be performed based on~~ and a value obtained by the measurement result of the measurement section through a predetermined number of measurement (**col 5 lines 15-20, 50-67, col 6 lines 1-45, col 7 lines 5-67, col 8 lines 1-67, col 9 lines 1-45**).

Shi does not show the handoff is performed based selectively on either one of a value obtained by time averaging the measurement result or a value obtained by number averaging the measurement

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result, however, it is noticeable Shi teaches the mobile station monitors paging channels over periods of time for determining if a handoff situation is in consideration (**see col 5 lines 15-67, col 6 lines 1-15**). Rajkotia teaches method and system for handoff in a wireless network, where the handoff decision is made based on an average measurement of signal quality over a period of time to avoid short-term fluctuation of detected pilot signal strength levels (**see paragraph [76]**), thus Rajkotia discloses the handoff is performed based selectively on either one of a value obtained by time averaging the measurement result or a value obtained by number averaging the measurement result.

Since both Shi and Rajkotia teach method and system for handoff, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the teachings of Shi, and have the handoff is performed based selectively on either one of a value obtained by time averaging the measurement result or a value obtained by number averaging the measurement result, taught by Rajkotia, to improve the method and system discussed by Shi (**see col 1 lines 5-67, col 3 lines 15-67, col 6 lines 1-27**).

8. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Shi (6,320,855)** in view of **Rajkotia et al. (2004/0121774)** and further in view of **Nobuhiro (Japanese Publication number 07-030945)**.

Consider claim 13, (New) The wireless communication terminal according to claim 5, Shi as modified by Rajkotia, teaches wherein the determination section determines which one of the values is used for determining whether or not the handoff is performed (**see paragraph [76]**).

Shi as modified by Rajkotia, does not show the values are based on a reception state of the wireless communication terminal. Nobuhiro teaches a system and method for channel changeover where the changeover is based on a mobile station's information such as a reception level (**see the abstract**), thus Nobuhiro discloses the values are based on a reception state of the wireless communication terminal.

Since Shi, Rajkotia and Nobuhiro teach handoff systems and methods, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the

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teachings of Shi, modified by Rajkotia and have the values are based on a reception state of the wireless communication terminal, taught by Rajkotia, to improve the method and system discussed by Shi (see col 1 lines 5-67, col 3 lines 15-67, col 6 lines 1-27).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUY C. HO whose telephone number is (571)270-1108. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alex V. Eisen can be reached on 571-272-7687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Huy Ho/
Examiner, Art Unit 2617

/Alexander Eisen/
Supervisory Patent Examiner, Art Unit 2617